REMARKS/ARGUMENTS

Claims 42-73, 80-91, 94 and 95 are active in this application.

Support for the hybridization conditions is found on page 5, lines 6-9. Support for Claims 94 and 95 is found in Claim 60, pages 4-5 and page 18, line 12.

No new matter is believed to be added.

Applicants thank the Examiner for the helpful suggestions provided in the Office Action. Those suggestions have been incorporated into the claimed invention. Therefore, it is believed that the rejections under 35 U.S.C. § 112, first paragraph and 35 U.S.C. § 112, second paragraph are no longer applicable to the claims and as such withdrawal of those rejections is requested.

Also, in view of the amendments, the rejections in view of Hunter, Graves, and Brown based on hybridizing fragments, are no longer applicable. Further details on these three rejections follows.

Graves et al describes a promoter sequence of the Fd gene in *C. pasteurianum* (page 11413, line 20 and Figure 7) and includes a (-35) region and a pribnow region (-10). However, Graves et al do not describe the purified nucleic acid as claimed in the amended Claim 42 (b) submitted herein, i.e., hybridizing over the full length of the complementary strand of SEQ ID NO:3 under the hybridization conditions set forth therein.

Accordingly, withdrawal of the rejection based on Graves is requested.

Brown is relied upon to describe some portion of a sequence of a secretory leader. However, Graves et al do not describe the purified nucleic acid as claimed, i.e., hybridizing over the full length of the complementary strand of SEQ ID NO:3 under the hybridization conditions set forth therein

The sequence described in Hunter et al. is 90 nucleotides long, i.e., 30 amino acids and provides only a 9 nucleotide region of overlap to the sequence in SEQ ID NO: 4, which is 90 nucleotides in length.

Hunter et al, however, do not describe the purified nucleic acid claimed in the amended Claim 60. Specifically, Hunter et al do not describe a sequence from a Clostridium strain, which hybridizes to SEQ ID NO:4, encodes a peptide that functions as a secretion signal peptide, AND comprises a hydrophobic region bordered by charged amino acids.

In maintaining this rejection, the Examiner contends that the hydrophobic region is bordered by charged amino acid residues and functions as a secretion signal (point k, page 4 of the Official Action). However, this reasoning is not correct. Figure 2 in Hunter describes that aspartic acid is not part of the signal sequence but the beta toxin portion of the amino acid sequence (the description of Figure 2 in Hunter makes clear that the underlined sequence is the N-terminus of the beta-toxin. Accordingly, it is clear that the sequence described in Hunter and that claimed are different.

Further, Hunter does not describe the purified nucleic acid as claimed in Claims 94 and 95, where the nucleic acid hybridizes over the full length of the complement (Claim 94) or encodes a 30 amino acid peptide.

Withdrawal of this ground of rejection is requested.

With respect to the election, Applicants request rejoinder upon finding that the elected claims are allowable.

Finally, Applicants request allowance of this application.

Respectfully submitted,

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